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<p>(21) International Application Number: PCT/DK92/00239 (22) International Filing Date: 6 August 1992 (06.08.92) (30) Priority data: 1444/91 9 August 1991 (09.08.91) DK (71) Applicant (for all designated States except US): UNITRON SCANDINAVIA A/S [DK/DK]; Torvegade 16, DK- 7160 Tørring (DK). (72) Inventor; and (75) Inventor/Applicant (for US only) : JESPERSEN, Søren [DK/DK]; Guldregnellé 31, DK-6920 Videbæk (DK). (74) Agent: LARSEN & BIRKEHOLM A/S SKANDINA- VISK PATENTBUREAU ; Østerå 25, P.O. Box 1651, DK-9100 Aalborg (DK).</p>		<p>(81) Designated States: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK (Utility model), ES (Utility model), FI, GB, HU (Utility model), JP (Utility model), KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US, Eu- ropean patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG). Published With international search report. In English translation (filed in Danish).</p>
<p>(54) Title: A DEVICE FOR ARTIFICIAL INSEMINATION OF ANIMAL HUSBANDRY</p> <div data-bbox="446 1144 1161 1669"><p>The diagram shows a side profile of a sow, labeled with the number 7. A device, labeled 3, is positioned on the sow's back. This device consists of a horizontal bar with two curved hoops, labeled 4 and 5, extending downwards. A sperm tube, labeled 6, is inserted into a holder, labeled 8, which is part of the device 3. The tube 6 is shown passing through the holder and towards the sow's rear. The entire assembly is used for artificial insemination.</p></div> <p>(57) Abstract</p> <p>A device for use in the artificial insemination of sows is built up of a basic part (3) which has two hoops (4, 5) for securing the device around the back and sides of a sow (7), and which at its one end is provided with a holder for a sperm tube (6). During the use of the device according to the invention, the hoop (5) and the basic part (3) will stimulate the sow (7) in the same manner as a boar, and therefore the sow (7) will stand still with curved back during the process of insemination. Manual work is thus to a great extent eliminated by the use of the device.</p>		

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A DEVICE FOR ARTIFICIAL INSEMINATION OF ANIMAL HUSBANDRY.

BACKGROUND OF THE INVENTION

5 The invention relates to a device for use in the artificial insemination of a domestic animal, especially a sow.

When carrying out artificial insemination, the sperm container has hitherto been held in the hand. This has been very time-consuming when several sows have required to be
10 inseminated, and with the known methods there have also been problems with getting the sow to stand still so that the insemination can be carried out in an efficient manner.

15 EXPLANATION OF THE INVENTION

The new and special aspect of the invention is that the device comprises a holder designed for the sperm container, said holder being secured to a support element arranged to
20 rest on or be secured to the sow.

With the device according to the invention, the sperm container can be held by the support element in such a manner that the sperm container can be held without manual
25 assistance. With several devices according to the invention, it is thus possible to inseminate several sows at the same time.

As disclosed in claim 2, it is preferred that the support element comprises a hoop which, during the insemination, can rest on the sow's back and at the same time lie up
30 against the sow's sides. With these arrangements, it is achieved that the sow is stimulated in the same way as when a boar influences the sow with its abdomen and its front

legs. During insemination with the device, the sow will react with a natural reflex and stand with curved back, and it will also stand calmly during the insemination.

5 With the device as disclosed in claim 3, it is achieved that the sperm can flow into the sow solely under the influence of gravitation.

10 As disclosed in claim 4, it is preferred that the holder supports the sperm container in a loose manner, so that the container is free to move during the insemination.

THE DRAWING

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A preferred embodiment of the device according to the invention will now be described in more detail with reference to the drawing, where

20 fig. 1 shows the device according to the invention seen from the side, and

fig. 2 shows the device seen in perspective during its use in the artificial insemination.

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DESCRIPTION OF THE PREFERRED EMBODIMENT

30 With a preferred embodiment of the invention, the device is configured as a hoop element 1 and a holder 2 for sperm tubes.

The hoop element 1 consists of long, flat pieces of stainless steel, and has a basic part 3 connecting two

hoops 4 and 5 with the holder 2.

The hoops 4 and 5 are flexible so that they can clamp down around the body of a sow. The holder 2 is configured at an angle in relation to the basic part 3 and is positioned so high that the lower part of the holder 2 is situated above a sow's vaginal orifice during insemination. The holder 2 has a hexagonal cross-section and is provided with a longitudinal slot. The sperm tube lies loosely in the holder 2, so that to a certain degree it can follow the movements of the sow 7.

During artificial insemination, the basic part 3 is positioned on the sow as shown in fig. 2. The hoop 5 will thus stimulate the sow in the same way as the front legs of a boar. Similarly, the basic part 3 will influence the sow like the boar's abdomen. The sow will thus stand quite calmly with curved back until the sperm has run out of the sperm tube 6.

It is preferred to provide the device with a handle 8 for use in the handling of the device.

With the help of three devices according to the invention, a pig farmer can inseminate 10-15 sows in approximately 20 minutes.

C L A I M S

1. Device for use in the artificial insemination of a domestic animal, particularly a sow, c h a r a c t e r i z e d in that the device comprises a holder intended for the sperm container, said holder being secured to a support element arranged to rest on or be fastened to the sow.
2. Device according to claim 1, c h a r a c t e r i z e d in that the support element comprises a hoop which, during the insemination, can rest on the sow's back and at the same time lie up against the sow's sides.
3. Device according to claim 1 or 2, c h a r a c t e r i z e d in that the holder is arranged to hold the sperm container at an inclined angle and above the level of the sow's vaginal orifice.
4. Device according to any of the foregoing claims, c h a r a c t e r i z e d in that the holder supports the sperm container in a loose manner, so that the container is free to move during the insemination.

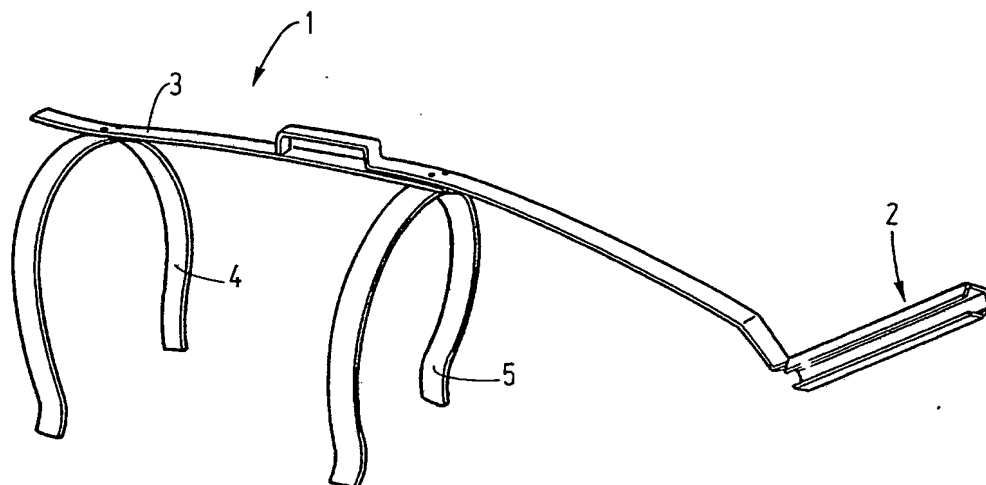


Fig. 1

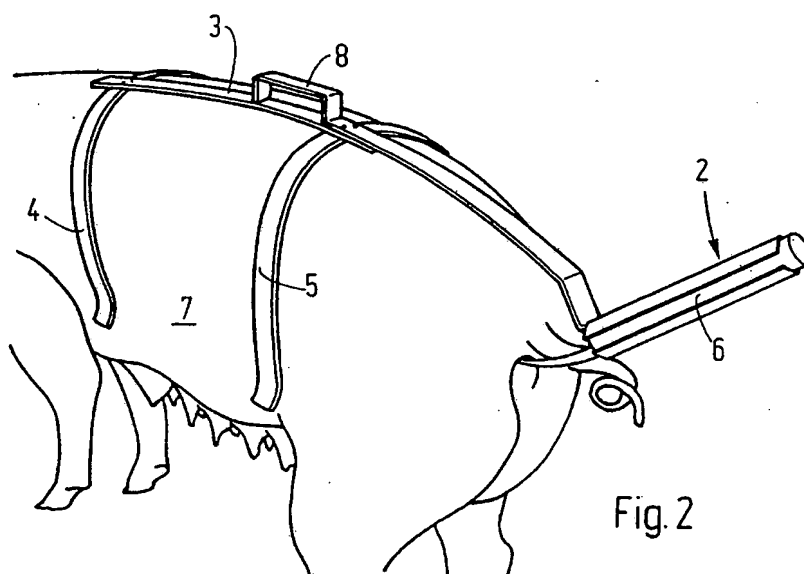
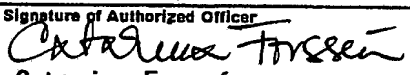


Fig. 2

INTERNATIONAL SEARCH REPORT

International Application No PCT/DK 92/00239

I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC5: A61D 19/02		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
IPC5	A01K; A61D	
Documentation Searched other than Minimum Documentation to the extent that such Documents are included in Fields Searched ⁸		
SE,DK,FI,NO classes as above		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category *	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
A	DK, C, 72645 (K.M. KNUDSEN) 18 June 1951, see figure 1 ---	1
A	FR, B, 74608 (MEDIMAN OY) 2 February 1986, see figure 2; claim 2 -----	1
<p>* Special categories of cited documents: ¹⁰</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
26th October 1992	05 -11- 1992	
International Searching Authority	Signature of Authorized Officer	
SWEDISH PATENT OFFICE	 Catarina Forssén	

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO. PCT/DK 92/00239**

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DK-C- 72645	51-06-18	NONE	
FR-B- 74608	86-02-02	FR-A- 1184055	00-00-00